

LESSON 2: Safety's House

LESSON'S CONCEPT

Household hazardous products usually have warning labels on their containers and should be kept out of reach of children.

PURPOSE

Students will learn to (1) identify and name some common household products that are hazardous; (2) learn the location of some potentially hazardous and poisonous materials that may be found in and around the home; and (3) recognize that hazardous products should be kept out of reach of children.

OVERVIEW

In this lesson students will:

- Look at magazine pictures of household products and identify some that could be hazardous.
- Classify labels from different household hazardous products according to the warnings that are printed on the product's label.
- Identify, on an overhead transparency, household hazardous products that should be placed on a high shelf away from children's reach.
- Examine labels on containers to identify any words that mean that the contents are hazardous.
- Cut out pictures of various products and glue the pictures of hazardous products on the illustration of the top shelf on the student's page and glue the pictures of nonhazardous products on the illustration of the lower shelf.

CORRELATIONS TO CALIFORNIA'S CONTENT STANDARDS AND FRAMEWORKS AND TO BENCHMARKS FOR SCIENCE LITERACY

- Students use the sense of sight to read warning labels on containers. They become aware of the words on products' labels

that mean that the products are hazardous. Students describe in their journals some labels that indicate that a product is hazardous.

- "Senses can warn individuals about danger . . ." (*Benchmarks for Science Literacy*, page 136)
- "Students collect information about objects and events in their environment." (*Mathematics Content Standards for California Public Schools, Kindergarten Through Grade Twelve*, page 3)
- "Students know about letters, words, and sounds. They apply this knowledge to read simple sentences." (*English–Language Arts Content Standards for California Public Schools, Kindergarten Through Grade Twelve*, page 1)
- "Students identify the basic facts and ideas in what they have read, heard, or viewed." (*English–Language Arts Content Standards for California Public Schools, Kindergarten Through Grade Twelve*, page 2)
- "Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept . . . students will . . . communicate observations orally and in drawings." (*Science Content Standards, Grades K–12; Kindergarten; Investigation and Experimentation, Standard 4e*)

SCIENTIFIC THINKING PROCESSES

observing, communicating, comparing, classifying

TIME

45 minutes to prepare for the lesson and 90 minutes to implement the lesson

VOCABULARY

hazardous products

Develop a word list appropriate for your students from the labels that you bring in. For example, caution, flammable, harmful, warning.

PREPARATION

- 1. Read the “Background Information for the Teacher” at the end of this lesson.
- 2. Make a transparency of “Mr. Safety’s House” (page 216); “Label with a Hazardous Word” (page 217); and “Words on Labels That Mean Hazardous” (page 217).
- 3. Duplicate the drawing of “Top and Bottom Shelves” (page 218) (or students could draw their own shelves in their journals) and the pictures of “Some Household Products” (page 219) for each student.
- 4. Duplicate “List of Products” as a homework assignment for students (page 221).
- 5. Obtain examples of labels from household hazardous products. Some examples of labels are provided at the end of this lesson (see “Some Product Labels” page 220).
- 6. For the “Homework Assignment” on page 215, write a letter to parents or guardians (see example on page 222).

MATERIALS

- Magazine photos and/or colored newspaper advertisements of household products, including some that are hazardous (See “List of Products” for ideas.)
- Examples of labels from household hazardous products
- Transparency of “Mr. Safety’s House,” water soluble pen, overhead projector
- Transparencies of “Label with a Hazardous Word” and “Words on Labels That Mean Hazardous”
- For each pair of students: the drawing of “Top and Bottom Shelves” and the pictures of “Some Household Products”
- Scissors, water-based glue, and colored crayons, markers, or pencils

- For each student, “List of Products” to use as a homework assignment

PRE-ACTIVITY QUESTIONS

- A. Tell students that since they have learned (in Lesson 1) how some unsafe products can look like safe products, they will now learn more about some products used around the home that may be hazardous and must be handled and stored carefully. Refer students to the list developed in Lesson 1 about types of things that they might have seen at home that they should not touch, smell, or taste.
 - Explain that *hazardous* means dangerous and that hazardous substances are likely to cause harm to the environment or to humans.
 - Display pictures from magazines and newspapers of household hazardous products.

Note: Younger children might need to see some real containers with labels. Consider using the containers that you began collecting in Lesson 1 for use in Lesson 3.

- B. Have students look at the magazine pictures that you collected. Ask students:
 - Which of these products have you actually seen?
 - What products would you not eat or drink? Allow five minutes for discussion. Encourage students to explain their reasons. (You might need to help students with their reasoning.)
 - *That’s medicine. Children should take a medication only if a grown-up gives it to them.*
 - *That’s bathroom cleaner. It is used to kill germs. We could get hurt if we eat or drink it.*
 - What products should you not touch?

Answers will vary; e.g., *ammonia, bleach, gasoline*. (Students should say that most poisonous products should not be touched.)

What products would you not eat or drink and why?

- *That's a bug killer that kills bugs; bugs are animals, and people are animals. So the bug killer could be poisonous to people.*
- *If you drink that drain cleaner, it will eat a hole in your stomach.*
- *If you spray window cleaner in your eyes, you could go blind or at least make your eyes hurt a lot.*
- *Even aspirin can kill you if you take a lot of it.*

Submitted by Ted Schut's first-grade class, Ripona Elementary School, Ripon Unified School District.

What products should you not touch and why?

- *Gasoline because it can burn your hands.*
- *Insect spray; the poison could go through your skin and you could get sick.*
- *Battery acid, because it can burn your skin.*
- *Bleach can burn your skin.*
- *Drain cleaner can burn your skin.*

Submitted by Jody Skidmore's third-grade science class, North Cow Creek Elementary School, North Cow Creek Elementary School District.

- C. Tell students that they will learn about reading warning labels to determine what products they should not touch.

PROCEDURE

- A. Tell students that they will hear a story about Mr. Safety and will tour Mr. Safety's home. Narrate the following:

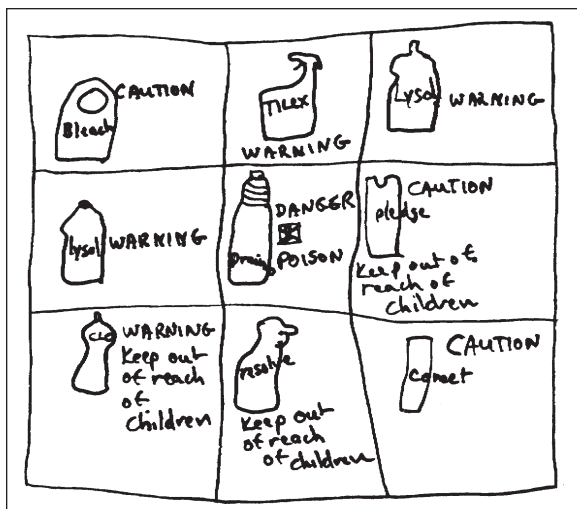
As Mr. Safety was cleaning the house one day, he noticed that someone left some products out that could hurt children if they ate, smelled, or touched them. So Mr. Safety decided that he would go through the whole house and pick up harmful products and put them on high shelves where children could not reach them and harm themselves.

- B. Show the transparency of "Mr. Safety's House."

1. Tell students that this is Mr. Safety's house and that they will all help Mr. Safety decide which items to pick up and put on higher shelves out of the reach of children.
2. Explain to students that the bubble they see on the transparency means that the size of the product has been magnified so we can see it better.
3. Direct students to look at and identify each room individually and ask, "What products in this room could hurt children if they are smelled, touched, or tasted?" If they do not know, help them out with hints such as, "What do your parents use to scrub the sink or bathtub?"
4. Ask children what Mr. Safety should put up on a high shelf away from children's reach. (Students should be aware that some products are not hazardous if touched, such as bubble bath and laundry soap, but are hazardous if swallowed and, therefore, should be kept out of children's reach.) As students mention which products should be placed on a high shelf, put an X over that product. You will put an X over:
 - Bubble bath and cleanser in the bathroom
 - Pills in the bedroom
 - Cleanser and drain opener in the kitchen
 - Furniture polish in the living room
 - Paint, charcoal lighter, bug killer, and laundry soap in the garage
5. Explain what the products do and some of the dangers of the products as you cross them out by placing an "X" over them. For example, drain opener unclogs drains, but it can burn the skin if touched; and the lungs, if inhaled. Oven sprays clean the oven, but they could harm the eyes if sprayed on them. Most household hazardous products are poisonous; therefore, they should never be swallowed. When all the potentially harmful products are crossed out, ask

the students if Mr. Safety has made the house safe for the children. *Yes.*

- C. Ask students what will help them in determining whether or not a product can be hazardous. *We can ask an adult; we can read the label.* Tell students that certain information must appear on labels of hazardous products, and these labels usually contain words that mean “hazardous.” Teach students the meaning of the skull and crossbones graphic on containers that indicates that the contents are poisonous.
1. Show students the transparency, “Label with a Hazardous Word.” Ask students to identify the word that means that the product may be hazardous.
 2. Distribute labels of household hazardous products to students. Ask students to identify and copy on a piece of paper the words that mean that the product may be hazardous. Students can also draw the containers. Students’ work can be displayed on a bulletin board. For younger students, you might need to write these words on the chalkboard or on a piece of butcher paper.



Submitted by Kathy Jones, second-grade teacher, Shasta Elementary School, Chico Unified School District.

3. Use the transparency, “Words on Labels That Mean Hazardous,” to show the following words:
 - Caution
 - Corrosive
 - Danger
 - Explosive

- Flammable
- Harmful if swallowed
- Ignitable
- Keep away from children and pets
- Poison
- Warning

4. Ask students to locate a label that corresponds to any of the words on the transparency, “Words on Labels That Mean Hazardous.”
5. Have students compare and match any words listed on the chalkboard or butcher paper to the words on the transparency.
6. For older students, ask students to classify and group the labels from different household hazardous products, based on the caution that is indicated on the product’s label. This can be done by creating a chart. For example, have students place all the labels with the word “corrosive” in one group; all the labels with the words “harmful if swallowed” in another group, and so on.

DISCUSSION/QUESTIONS

Discuss with students:

- Where should you look first to find out whether a household product is potentially harmful? *On the label of the container.* If you are not sure, what should you do? *Ask a parent or other adult.*
- What words on a package’s label indicate that the product is dangerous? *Caution, harmful, keep out of reach of children, poison.*
- What should you do if you find someone eating or drinking something harmful or poisonous? *Get an adult; if no adult is around, call the poison control center or 911.*

APPLICATION

- A. Tell the class that they will get some pictures of things that Mr. Safety needed to put away. Mr. Safety has two shelves to put things on. He wants to use the very high shelf for hazardous products that should be kept out of reach of children. The low shelf is for things that are safe for children.

Note: The following activity can also be assigned as homework.

1. Ask students to work in pairs. Pass out copies of “Top and Bottom Shelves” and “Some Household Products.” (Pictures of magazine and newspaper advertisements could also be used.) Tell students that they can cut out the pictures of products and tape or glue them on the appropriate shelf. Students can also color their pictures.
 - Emphasize that products placed on the high shelf are put out of the reach of children because they are potentially harmful.
 - Be sure to emphasize that, in real life, children should never pick up products that could be harmful, even to put them away. Only an adult should touch containers of potentially harmful products.
2. Check students’ work and discuss any hazardous products that students did not identify as hazardous. Then write the following words on the chalkboard:
 - caution
 - danger
 - warning

Ask students to write one of the words on each of the products on the top shelf. On small items, like pills, they can use a bubble to show a magnified label and write the word on the outside of the product (as in “Mr. Safety’s House”).

- B.** Have students take their work home to share with their families.

Homework Assignment: Send the letter to parents’ or guardians’ homes with students. Ask parents to go through at least one room with their child and conduct a survey for hazardous products. **This homework assignment must be done with an adult.** As an optional activ-

ity, students can draw their own house and indicate where some household hazardous products are located.

Note: The example of the letter is located at the end of this lesson.

- C.** Ask students to share their experiences of doing the homework assignment with their parents or guardians. A class chart can be designed, indicating each item, the room, and its location in the room.
- D.** Ask students to write a sentence or two in their journals about what they have learned in this lesson. They can also draw a picture. Have them share their journal entries in small groups. Check each student’s writing.

EXTENSIONS

Have students work in groups to make a collage from the labels of household hazardous products. One way to acquire the labels for the whole class is to photocopy some labels and cut out additional labels from magazines and newspapers.

Project Idea: Have students design “Hazard Stickers” to warn people that certain household products are hazardous.

RESOURCES

The No Waste Anthology: A Teacher’s Guide to Environmental Activities K–12. California Department of Health Services Toxic Substances Control Program, Education and Information Unit. No date. Can be obtained from the California Department of Health Services, P.O. Box 942732, Sacramento, CA 94234-7320; (916) 322-0476.

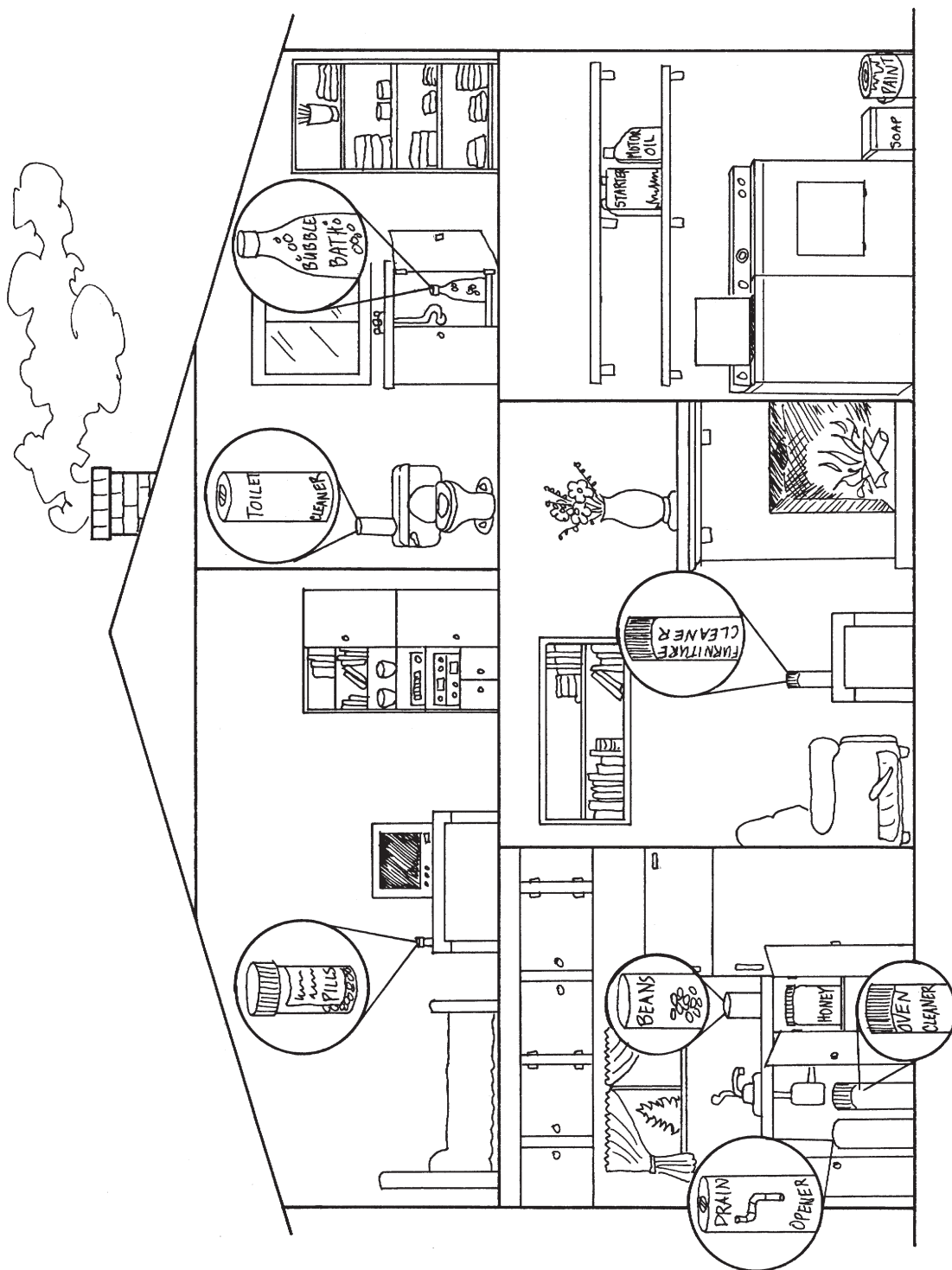
Contains some activities on household hazardous waste.

Toxics in My Home? You Bet! Local Government Commission, 909 12th St., Sacramento, CA 95814; (916) 448-1198.

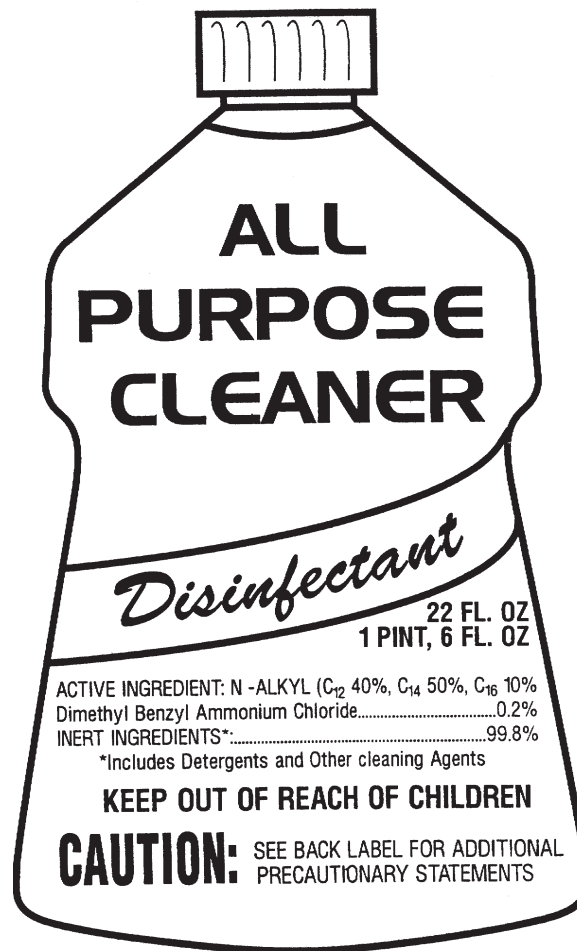
Describes hazardous products in a home.

Transparency and Student's Page

MR. SAFETY'S HOUSE



LABEL WITH A HAZARDOUS WORD

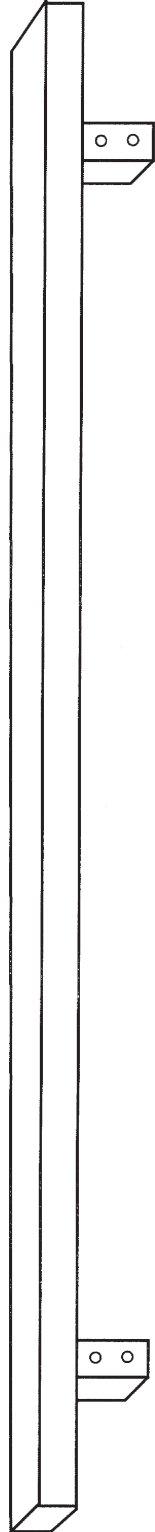
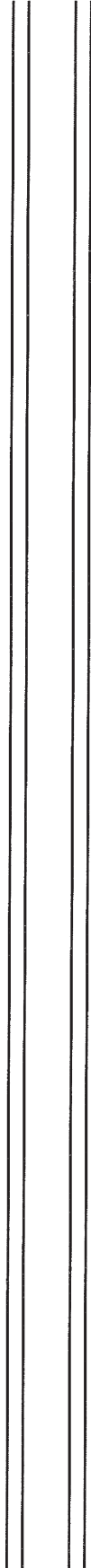


WORDS ON LABELS THAT MEAN HAZARDOUS

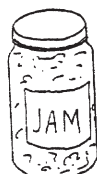
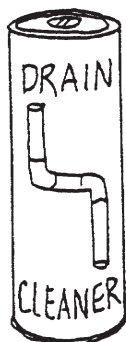
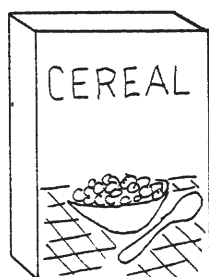
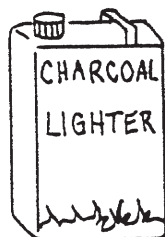
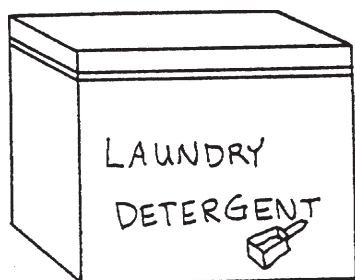
- Caution
- Corrosive
- Danger
- Explosive
- Flammable
- Keep away from children and pets
- Harmful if swallowed
- Ignitable
- Poison
- Warning

Student's Page

TOP AND BOTTOM SHELVES



SOME HOUSEHOLD PRODUCTS



Student's Page

SOME PRODUCT LABELS



LIST OF PRODUCTS

Safety Caution: The following must be done under the direct supervision of a parent or guardian.

Please select one or two rooms (such as bathroom and garage) in your house to survey for potentially hazardous products. Locate any of the following products in these rooms and mark “X” on the chart below. Next to any of the products listed below that you found, copy the words from the label that indicate that this product may be hazardous. See example. You need to complete only five of the listed items, but you can do more if you want to.

Product	Word or words that indicate this product is hazardous
<i>e.g., <u>X</u> Floor polish</i>	<i>Caution</i>
___ 1. Antifreeze	
___ 2. Battery	
___ 3. Bleach	
___ 4. Disinfectant cleaner	
___ 5. Drain opener	
___ 6. Enamel paint	
___ 7. Furniture polish	
___ 8. Laundry soap	
___ 9. Mice or rat poison	
___ 10. Motor oil	
___ 11. No-pest strip	
___ 12. Oil based paint	
___ 13. Oven cleaner	
___ 14. Paint thinner	
___ 15. Pet flea collar	
___ 16. Roach or ant spray	
___ 17. Room deodorizer	
___ 18. Scouring powder	
___ 19. Slug bait	
___ 20. Toilet bowl cleaner	
___ 21. Weed killer	
___ 22. Window cleaner	

(Use school's letterhead.)

Dear Parent or Guardian:

Please read the following information with your child:

We are studying about the potential danger to children if they smelled, touched, or tasted household hazardous products. (Household products are hazardous if not used properly. They usually have a label indicating: caution, keep out of reach of children and pets, warning, poison, etc.) In class we emphasized the importance for such products to be placed out of the reach of children. Please use the "List of Products" your child brought home to inventory products in at least one of your rooms. Write (or have your child write) on the survey form the word appearing on the product's container that indicates that this product might be hazardous. Please place potentially dangerous products on high shelves where children cannot reach them. Your child should be ready to report back to class some part of this experience.

As an optional activity, your child can draw your house and indicate where some household hazardous products are located.

Thank you,

BACKGROUND INFORMATION FOR THE TEACHER

In order to accomplish a number of common household tasks efficiently and effectively with minimal effort, people in our society use many products which contain hazardous substances. A household product is hazardous if the label mentions words like "poison," "harmful if swallowed," "caution," "flammable," "warning," "danger," "pesticide," "keep away from heat

or open flames," or "keep away from children and pets." Younger children should be able to recognize the skull and crossbones symbol. The average home contains numerous products that are potentially hazardous if stored, handled, or used improperly. Children are often attracted to colorful bottles of home cleaners and other potentially hazardous products.